5. Rural Health Care Support

The portion of the 1996 Telecommunications Act that covers universal service support for rural health care providers states that "[a] telecommunications carrier shall . . . provide telecommunications services . . . to any public or non-profit health care provider . . . at rates that are reasonably comparable to rates charged for similar services in urban areas in that state."[1] The Commission's universal service rules permit eligible health care providers[2] to receive support for any telecommunications service.[3]

In 2003, the FCC significantly changed the universal service support mechanism for rural health care providers, effective in Funding Year 2004 (July 1, 2004 – June 30, 2005). Dedicated emergency departments of rural for-profit hospitals that participate in Medicare are now deemed "public" health care providers eligible to receive prorated rural heath care support.[4] Further, rural health providers may now receive support for any form of Internet access reasonably related to the health care needs of the facility.[5] Rural health care providers may also use "safe harbor" categories to compare the urban and rural rates for functionally similar services as viewed from the perspective of the end user.[6] Also, rural health care providers may compare their rural rates to urban rates in any city with a population of at least 50,000 in the state, as opposed to the nearest city with a population of 50,000.[7] Finally, rural health care providers may

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1   47 U.S.C. § 254(h)(1)(A).

2   47 C.F.R. § 54.601.

3   A 1.544 Mbps (T1) maximum bandwidth cap was employed in Funding Years 1 and 2. *See Federal-State Joint Board on Universal Service,* CC Docket No. 96-45, Report and Order, 12 FCC Rcd 8776, 8952-94 (1997). The Commission removed the bandwidth cap for year three and beyond. *See Federal-State Joint Board on Universal Service,* CC Docket Nos. 97-21 and 96-45, Sixth Order on Reconsideration in CC Docket No. 97-21, Fifteenth Order on Reconsideration in CC Docket No. 96-45, 14 FCC Rcd 18756 (1999) *(Fifteenth Order on Reconsideration).*

4   *See Rural Health Care Support Mechanism,* WC Docket No. 02-60, Report and Order, Order on Reconsideration and Further Notice of Proposed Rulemaking, 18 FCC Rcd 24546 (2003) *(Rural Health Care Order)* at 13.

5   *See Rural Health Care Order* at 22.

6   *See Rural Health Care Order* at 33.

7   *See Rural Health Care Order* at 37.

receive discounts for satellite services even where alternative terrestrial-based services may be available.[8]

In December 2004, the Commission released a *Second Order*[9] that further modified the Commission's rules for rural health care support. In this *Second Order*, the Commission changed its definition of rural for the purposes of the rural health care support mechanism. Now a "rural area" is an area that is not located within or near a large population base. Specifically, a "rural area" is an area that (a) is entirely outside of a Core Based Statistical Area (CBSA); (b) is within a CBSA that does not have any urban area with a population of 25,000 or greater; or (c) is in a CBSA that contains an urban area with a population of 25,000 or greater, but is within a specific census tract that itself does not contain any part of a place or urban area with a population of greater than 25,000. This new definition was effective as of Funding Year 2005 (July 1, 2005 – June 30, 2006). Several other rules also were changed. The Commission expanded funding for mobile rural health care providers by subsidizing the difference between the rate for the satellite service and the rate for an urban wireline service with a similar bandwidth. June 30 is now the final deadline for applications for support for health care providers seeking discounts for a specific funding year under the rural health care support mechanism. In addition a rural health care provider in a state that is entirely rural may now receive support for advanced telecommunications and information services.

USAC recently streamlined the application process for the Rural Health Care mechanism. USAC combined the information from two forms onto one,[10] allowed the new form to be filled out electronically, and, where possible, prefilled the form with that applicant's information.[11] Now, an eligible rural health care provider seeking funding must first submit FCC Form 465 (description of services requested and certification form) to the Rural Health Care Division (RHCD).[12] If the

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8   *See Rural Health Care Order* at 44.

9   *See Rural Health Care Support Mechanism*, WC Docket No. 02-60, Second Report and Order, Order on Reconsideration, and Further Notice of Proposed Rulemaking, 19 FCC Rcd 24613 (2004) (*Second Order*).

10   FCC Forms 466 and 468 were combined into the new FCC form 466.

11   *See* http://www.rhc.universalservice.org/whatsnew/062003.asp#2

12   The Rural Health Care Corporation merged into the Universal Service Administrative and became the Rural Health Care Division on January 1, 1999. *See Changes to the Board of Directors of the National Exchange Carrier Association, Inc., Federal-State Joint Board on Universal Service*, CC Docket Nos. 97-21 and 96-45, Third Report and Order in CC Docket No. 97-21 and Fourth Order on Reconsideration in CC Docket No. 97-21 and Eighth Order on Reconsideration in CC Docket No. 96-45, 13 FCC Rcd 25058, 25064-65, para. 12 (1998).

RHCD determines that the health care provider is eligible, it posts the Form 465 on its website.[13] 28 days thereafter, the rural health care provider may contract with the most cost-effective bidder. The health care provider then fills out FCC Form 466 (funding request and certification form), and submits it to the RHCD. Upon receipt and approval of FCC Form 466, the RHCD sends a Funding Commitment Letter to the rural health care provider. The letter explains that the request has received preliminary approval, and provides an estimate of the amount of support that can be expected. The rural health care provider must respond by submitting FCC Form 467 (receipt of service confirmation form) to verify that the service has begun. RHCD then sends a Support Schedule to the carrier and the health care provider. The carrier provides service to the rural health care provider, and then invoices the RHCD for the support amount. Upon approval of the invoice, USAC reimburses the carrier.

By rule, the Commission has established a $400 million per funding year cap for the rural health care mechanism.[14] For more information on the Universal Service Program for Rural Health Care providers, visit the RHCD website.[15]

USAC supplied the Commission with funding commitments and disbursements information as of June 2, 2005. Table 5.1 summarizes funding disbursements for all funding years by service speed. Tables 5.2 through 5.4 show details for Funding Years 2002 through 2004. For details on the preceding funding years, see the previous editions of the *Monitoring Report*.[16] Table 5.2 summarizes funding commitments and disbursements on a state-by-state basis.

Funding Year 2002 was July 1, 2002, through June 30, 2003. All activity for Funding Year 2002 is complete.[17] Final figures show that over $23.3 million was committed, and over $21.3 million was disbursed.[18]

Funding Year 2003 was July 1, 2003, through June 30, 2004. USAC reports that it received 3,172 Form 466 packets.[19] Of those, 56 were denied, 231 were withdrawn by the applicant, and 14

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13   The forms may be viewed at
      <http://www.rhc.universalservice.org/telecomcarriers/searchpostings/default.asp>.

14   47 C.F.R. § 54.623(a).

15   *See* www.rhc.universalservice.org.

16   *Universal Service Monitoring Report*, CC Docket No. 98-202, November 6, 2001, October 9, 2002, and December 22, 2003.

17   Universal Service Administrative Company, *Federal Universal Service Support Mechanisms Fund Size Projections for the Third Quarter 2005*, at 15.

18   *See* Table 5.2.

were incomplete or require clarification. As of June 2, 2005, over $26.0 million had been committed, and over $18.7 million had been disbursed. [20]

Funding Year 2004 was July 1, 2004, through June 30, 2005. USAC reports that it posted 2,793 Form 465 packets, and received 1,981 Form 466 packets. Of the 1,981 Form 466 packets, 1,029 have been completely processed, 89 are awaiting supervisory approval only, 120 are complete and ready to process, 88 have been withdrawn by the applicant, 15 have been denied, and 640 were incomplete or require clarification.[21] As of June 2, 2005, over $20.1 million had been committed, and over $2.1 million had been disbursed.[22]

Table 5.3 shows state-by-state disbursements by service speed. In some instances, such as with frame relay service, the service speed was not clearly identifiable. Whenever possible, the most likely speed for each service was assumed. For example, Frame Relay theoretically could be provided at voice grade speeds, but the vast majority of it is provided at broadband speeds (200K to 1.49Mb), so Frame Relay was assumed to be broadband at that level.

Table 5.4 shows, for Funding Years 2002 and 2003, state-by-state disbursements from the Rural Health Care Support Mechanism, the population of the rural areas, and the disbursements per person in rural areas.

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19   Universal Service Administrative Company, *Federal Universal Service Support Mechanisms Fund Size Projections for the Third Quarter 2005*, at 16.

20   *See* Table 5.2.

21   Universal Service Administrative Company, *Federal Universal Service Support Mechanisms Fund Size Projections for the Third Quarter 2005*, at 17.

22   *See* Table 5.2.

Table 5.1
Rural Health Care Funding Disbursements by Funding Year

Funding Year	Voice Grade 56K to 199K	Broadband 200K to 1.49Mb	1.5Mb and faster	Other Service or Speed Unknown	Total
1998	$202,778	$880,375	$2,292,252	$0	$3,375,405
1999	452,992	1,073,816	2,719,619	58,132	4,304,559
2000	613,595	3,015,004	6,685,573	0	10,314,172
2001	319,539	8,110,537	10,125,267	0	18,555,343
2002	423,522	10,614,090	10,342,844	0	21,380,456
2003	415,461	7,878,340	10,455,720	2,200	18,751,722
2004	83,859	534,105	1,491,558	16,300	2,125,823

Note: Disbursements through June 2, 2005. Because of the appeals process, funding commitments and disbursements may be made after the program year ended.
Source: USAC data. Rollups performed by the Industry Analysis and Technology Division, Wireline Competition Bureau, FCC.

Table 5.2
Rural Health Care Funding Commitments and Disbursements by State

Funding Year 2002: July 1, 2002 through June 30, 2003

State	Total Funds Committed	Providers Receiving Support	Total Funds Disbursed	Providers Receiving Support
Alabama	$25,969	4	$23,988	4
Alaska	14,008,346	164	12,670,097	158
Arizona	1,201,363	57	997,097	48
Arkansas	69,264	30	60,442	26
California	354,689	70	345,832	69
Colorado	140,658	13	140,658	13
Connecticut	0	0	0	0
Delaware	0	0	0	0
District of Columbia	0	0	0	0
Florida	249,386	51	220,004	45
Georgia	43,465	3	43,465	3
Hawaii	230,975	16	227,758	16
Idaho	110,423	17	94,748	16
Illinois	114,643	30	111,572	28
Indiana	14,672	6	14,565	6
Iowa	160,686	40	158,091	40
Kansas	228,222	51	220,499	51
Kentucky	540,945	162	534,665	160
Louisiana	1,552	1	1,552	1
Maine	43,472	4	19,305	4
Maryland	0	0	0	0
Massachusetts	0	0	0	0
Michigan	597,812	49	590,740	48
Minnesota	894,318	91	836,859	85
Mississippi	80,628	16	76.389	13
Missouri	49,883	11	33,383	9
Montana	510,429	56	501,491	55
Nebraska	549,256	29	524,119	29
Nevada	65,337	18	55,608	16
New Hampshire	0	0	0	0
New Jersey	0	0	0	0
New Mexico	238,893	25	234,954	24
New York	20,620	3	20,620	3
North Carolina	196,481	21	170,665	18
North Dakota	478,202	49	466,897	49
Ohio	124,651	9	124,651	9
Oklahoma	75,955	25	71,437	24
Oregon	55,583	15	25,556	10
Pennsylvania	12,211	7	12,211	7
Rhode Island	0	0	0	0
South Carolina	20,974	2	20,974	2
South Dakota	374,660	45	355,608	44
Tennessee	81,733	26	55,836	16
Texas	33,054	9	20,658	7
Utah	400,322	21	361,311	17
Vermont	0	0	0	0
Virgin Islands	66,209	8	66,209	8
Virginia	195,418	20	195,186	20
Washington	78,333	29	77,199	28
West Virginia	49,022	8	49,022	8
Wisconsin	425,357	82	395,886	81
Wyoming	155,387	12	152,648	12
Totals	$23,369,457	1,405	$21,380,456	1,330

Note: All activity for Funding Year 2002 is complete.
Source: USAC data. Rollups performed by the Industry Analysis and Technology Division, Wireline Competition Bureau, FCC.

Table 5.2
Rural Health Care Funding Commitments and Disbursements by State

Funding Year 2003: July 1, 2003 through June 30, 2004

State	Total Funds Committed	Providers Receiving Support	Total Funds Disbursed	Providers Receiving Support
Alabama	$28,736	4	$26,591	3
Alaska	15,006,652	193	11,138,143	111
Arizona	1,182,242	62	460,643	41
Arkansas	113,247	36	51,236	19
California	378,376	77	242,427	32
Colorado	142,852	15	105,305	12
Connecticut	0	0	0	0
Delaware	0	0	0	0
District of Columbia	0	0	0	0
Florida	259,622	44	96,526	6
Georgia	70,580	5	69,731	4
Hawaii	211,966	20	211,966	20
Idaho	212,171	22	80,396	16
Illinois	91,725	25	57,857	12
Indiana	26,375	8	18,976	5
Iowa	186,674	41	127,441	32
Kansas	377,833	62	316,036	48
Kentucky	477,586	207	449,609	197
Louisiana	6,501	3	1,198	1
Maine	83,600	9	1,580	1
Maryland	0	0	0	0
Massachusetts	0	0	0	0
Michigan	551,152	50	432,552	37
Minnesota	1,005,904	101	748,323	63
Mississippi	113,354	14	97,482	7
Missouri	101,525	26	63,214	18
Montana	551,206	61	463,343	55
Nebraska	615,389	33	594,167	29
Nevada	66,767	18	21,397	7
New Hampshire	0	0	0	0
New Jersey	0	0	0	0
New Mexico	314,361	49	155,135	13
New York	14,252	3	13,651	2
North Carolina -	149,423	16	71,038	8
North Dakota	460,135	58	389,599	49
Ohio	142,734	8	80,352	6
Oklahoma	106,114	35	30,296	11
Oregon	21,586	9	3,152	1
Pennsylvania	47,646	13	19,251	8
Rhode Island -	0	0	0	0
South Carolina	7,323	3	4,320	1
South Dakota	421,819	49	301,947	28
Tennessee	31,717	14	9,201	3
Texas	139,929	28	2,560	1
Utah	687,450	28	548,384	24
Vermont	1,265	3	1,040	3
Virgin Islands	115,575	9	113,637	8
Virginia	166,495	28	162,199	27
Washington	68,592	28	37,565	11
West Virginia	123,204	29	72,180	18
Wisconsin	983,229	92	739,355	71
Wyoming	155,530	12	120,722	10
Totals	$26,020,414	1,650	$18,751,722	1,079

Note: Disbursements through June 2, 2005. Because of the appeals process, funding commitments and disbursements may be made after the program year ended.
Source: USAC data. Rollups performed by the Industry Analysis and Technology Division, Wireline Competition Bureau, FCC.

Table 5.2
Rural Health Care Funding Commitments and Disbursements by State

Funding Year 2004: July 1, 2004 through June 30, 2005

State	Total Funds Committed	Providers Receiving Commitments	Total Funds Disbursed	Providers Receiving Support
Alabama	$792	1	$619,536	11
Alaska	12,798,279	148	37,450	5
Arizona	428,833	38	11,863	3
Arkansas	75,970	13	48,961	10
California	295,331	32	8,969	1
Colorado	39,258	5	0	0
Connecticut	0	0	0	0
Delaware	0	0	0	0
District of Columbia	0	0	0	0
Florida	135,344	17	0	0
Georgia	109,557	7	27,124	2
Hawaii	267,772	21	7,800	1
Idaho	58,210	16	23,184	9
Illinois	172,666	29	5,868	5
Indiana	127,905	6	0	0
Iowa	132,756	30	84,710	12
Kansas	387,708	50	24,686	5
Kentucky	657,288	175	262,245	148
Louisiana	498	1	0	0
Maine	32,295	6	0	0
Maryland	0	0	0	0
Massachusetts	0	0	0	0
Michigan	176,567	21	19,856	6
Minnesota	649,921	80	177,540	29
Mississippi	144,804	11	44,392	6
Missouri	105,996	23	4,406	9
Montana	458,301	47	86,466	12
Nebraska	700,612	42	11,296	5
Nevada	24,558	4	0	0
New Hampshire	2,483	1	1,241	1
New Jersey	0	0	0	0
New Mexico	74,493	21	9,500	1
New York	7,274	1	0	0
North Carolina	24,687	7	9,984	1
North Dakota	458,017	71	223,898	36
Ohio	37,344	5	22,518	4
Oklahoma	32,851	2	0	0
Oregon	3,667	1	0	0
Pennsylvania	36,016	9	0	0
Rhode Island	0	0	0	0
South Carolina	42,679	10	0	0
South Dakota	358,208	29	283,216	23
Tennessee	41,621	19	6,235	1
Texas	365,695	26	0	0
Utah	149,152	19	20,600	14
Vermont	23,549	6	4,105	4
Virgin Islands	0	0	0	0
Virginia	15,459	2	9,221	1
Washington	42,243	10	0	0
West Virginia	40,871	10	0	0
Wisconsin	412,911	48	29,045	8
Wyoming	43,620	4	0	0
Totals	$20,194,060	1,124	$2,125,823	373

Note: Disbursements through June 2, 2005. Because of the appeals process, funding commitments and disbursements may be made after the program year ended.

Source: USAC data. Rollups performed by the Industry Analysis and Technology Division, Wireline Competition Bureau, FCC.

Table 5.3
Disbursements by Service Speeds Acquired by Rural Health Care Providers

Funding Year 2002: July 1, 2002 through June 30, 2003

State	Voice Grade 56K to 199K	Broadband 200K to 1.49Mb	Broadband 1.5Mb and faster	Other Service or Speed Unknown	Total
Alabama	$0	$153	$23,835	$0	$23,988
Alaska	0	8,315,687	4,354,410	0	12,670,097
Arizona	0	142,394	854,703	0	997,097
Arkansas	4,160	5,483	50,799	0	60,442
California	181,726	111,820	52,286	0	345,832
Colorado	2,432	0	138,226	0	140,658
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	168,333	51,671	0	220,004
Georgia	0	0	43,465	0	43,465
Hawaii	0	0	227,758	0	227,758
Idaho	0	78,152	16,596	0	94,748
Illinois	0	11,257	100,315	0	111,572
Indiana	0	1,194	13,371	0	14,565
Iowa	530	31,633	125,928	0	158,091
Kansas	31,973	74,483	114,044	0	220,499
Kentucky	35,267	303,816	195,581	0	534,665
Louisiana	0	1,552	0	0	1,552
Maine	17,689	1,616	0	0	19,305
Maryland	0	0	0	0	0
Massachusetts	0	0	0	0	0
Michigan	16,492	31,626	542,622	0	590,740
Minnesota	3,066	348,498	485,295	0	836,859
Mississippi	14,937	17,763	43,689	0	76,389
Missouri	0	10,034	23,349	0	33,383
Montana	1,769	16,676	483,046	0	501,491
Nebraska	0	70,107	454,011	0	524,119
Nevada	0	31,615	23,993	0	55,608
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	161,609	73,345	0	234,954
New York	0	1,129	19,491	0	20,620
North Carolina	0	22,658	148,007	0	170,665
North Dakota	23,733	55,507	387,657	0	466,897
Ohio	173	4,632	119,847	0	124,651
Oklahoma	199	5,109	66,128	0	71,437
Oregon	0	20,111	5,445	0	25,556
Pennsylvania	1,566	0	10,645	0	12,211
Rhode Island	4,644	0	16,330	0	20,974
South Carolina	5,364	98,457	251,788	0	355,608
South Dakota	0	0	0	0	0
Tennessee	9,596	26,124	20,116	0	55,836
Texas	1,726	1,841	17,091	0	20,658
Utah	0	105,963	255,348	0	361,311
Vermont	0	0	0	0	0
Virgin Islands	1,128	0	65,081	0	66,209
Virginia	0	77,709	117,477	0	195,186
Washington	1,267	26,574	49,358	0	77,199
West Virginia	0	41,365	7,657	0	49,022
Wisconsin	64,084	141,429	190,373	0	395,886
Wyoming	0	49,980	102,668	0	152,648
Totals	$423,522	$10,614,090	$10,342,844	$0	$21,380,456

Note: All activity for Funding Year 2002 is complete.
Source: USAC data. Rollups performed by the Industry Analysis and Technology Division, Wireline Competition Bureau, FCC.

Table 5.3
Disbursements by Service Speeds Acquired by Rural Health Care Providers
Funding Year 2003: July 1, 2003 through June 30, 2004

State	Voice Grade 56K to 199K	Broadband 200K to 1.49Mb	Broadband 1.5Mb and faster	Other Service or Speed Unknown	Total
Alabama	$0	$0	$26,591	$0	$26,591
Alaska	22,766	6,604,768	4,510,609	0	11,138,143
Arizona	0	13,263	447,380	0	460,643
Arkansas	0	3,330	47,906	0	51,236
California	176,002	14,109	52,316	0	242,427
Colorado	15,114	0	90,191	0	105,305
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	2,244	94,282	0	96,526
Georgia	0	0	69,731	0	69,731
Hawaii	0	0	211,966	0	211,966
Idaho	0	39,609	40,787	0	80,396
Illinois	0	16,056	41,801	0	57,857
Indiana	0	0	18,976	0	18,976
Iowa	0	23,545	103,896	0	127,441
Kansas	21,684	202,215	92,136	0	316,036
Kentucky	1,795	214,797	233,017	0	449,609
Louisiana	0	0	1,198	0	1,198
Maine	0	1,580	0	0	1,580
Maryland	0	0	0	0	0
Massachusetts	0	0	0	0	0
Michigan	3,120	8,528	420,905	0	432,552
Minnesota	6,133	168,028	574,162	0	748,323
Mississippi	0	3,989	93,493	0	97,482
Missouri	0	12,687	50,527	0	63,214
Montana	0	8,428	454,915	0	463,343
Nebraska	22,517	67,708	503,942	0	594,167
Nevada	0	0	21,397	0	21,397
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	85,459	69,676	0	155,135
New York	1,975	0	11,676	0	13,651
North Carolina	0	876	70,162	0	71,038
North Dakota	10,758	24,696	354,146	0	389,599
Ohio	179	1,332	78,841	0	80,352
Oklahoma	0	10,220	20,075	0	30,296
Oregon	0	0	3,152	0	3,152
Pennsylvania	1,686	35	17,530	0	19,251
Rhode Island	4,320	0	0	0	4,320
South Carolina	4,859	7,079	290,009	0	301,947
South Dakota	0	0	0	0	0
Tennessee	5,547	0	3,654	0	9,201
Texas	2,560	0	0	0	2,560
Utah	0	115,225	433,159	0	548,384
Vermont	0	1,040	0	0	1,040
Virgin Islands	0	0	113,637	0	113,637
Virginia	0	451	161,748	0	162,199
Washington	0	0	37,565	0	37,565
West Virginia	0	39,329	32,851	0	72,180
Wisconsin	114,447	133,857	488,851	2,200	739,355
Wyoming	0	53,858	66,864	0	120,722
Totals	$415,461	$7,878,340	$10,455,720	$2,200	$18,751,722

Note: Disbursements through June 2, 2005. Because of the appeals process, funding commitments and disbursements may be made after the program year ended.
Source: USAC data. Rollups performed by the Industry Analysis and Technology Division, Wireline Competition Bureau, FCC.

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Table 5.3

Disbursements by Service Speeds Acquired by Rural Health Care Providers

Funding Year 2004: July 1, 2004 through June 30, 2005

State	Voice Grade 56K to 199K	Broadband 200K to 1.49Mb	Broadband 1.5Mb and faster	Other Service or Speed Unknown	Total
Alabama	$0	$0	$0	$0	$0
Alaska	13,059	280,353	326,123	0	619,536
Arizona	0	0	37,450	0	37,450
Arkansas	325	0	11,538	0	11,863
California	1,050	8,477	39,434	0	48,961
Colorado	0	0	8,969	0	8,969
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	0	0	27,124	0	27,124
Hawaii	0	0	7,800	0	7,800
Idaho	750	12,911	9,523	0	23,184
Illinois	1,666	0	4,202	0	5,868
Indiana	0	0	0	0	0
Iowa	560	3,222	80,928	0	84,710
Kansas	7,198	0	17,489	0	24,686
Kentucky	36,222	118,511	107,512	0	262,245
Louisiana	0	0	0	0	0
Maine	0	0	0	0	0
Maryland	0	0	0	0	0
Massachusetts	0	0	0	0	0
Michigan	7,749	1,355	10,751	0	19,856
Minnesota	2,279	1,746	173,515	0	177,540
Mississippi	0	2,322	41,980	0	44,302
Missouri	4,406	0	0	0	4,406
Montana	485	0	85,980	0	86,466
Nebraska	1,010	0	10,286	0	11,296
Nevada	0	0	0	0	0
New Hampshire	0	0	1,241	0	1,241
New Jersey	0	0	0	0	0
New Mexico	0	0	9,500	0	9,500
New York	0	0	0	0	0
North Carolina	0	0	9,984	0	9,984
North Dakota	402	101,571	121,925	0	223,898
Ohio	0	0	6,218	16,300	22,518
Oklahoma	0	0	0	0	0
Oregon	0	0	0	0	0
Pennsylvania	0	0	0	0	0
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	2,362	3,637	277,216	0	283,216
Tennessee	0	0	6,235	0	6,235
Texas	0	0	0	0	0
Utah	0	0	20,600	0	20,600
Vermont	2,400	0	1,705	0	4,105
Virgin Islands		0	0	0	0
Virginia	1,181	0	8,040	0	9,221
Washington	0	0	0	0	0
West Virginia	0	0	0	0	0
Wisconsin	754	0	28,291	0	29,045
Wyoming	0	0	0	0	0
Totals	$83,859	$534,105	$1,491,558	$16,300	$2,125,823

Note: Disbursements through June 2, 2005. Because of the appeals process, funding commitments and disbursements may be made after the program year ended.
Source: USAC data. Rollups performed by the Industry Analysis and Technology Division, Wireline Competition Bureau, FCC.

Table 5.4
Disbursements per Person for Rural Health Care Support Mechanism, by State
Values in Thousands, Except Disbursements per Person in Rural Areas

Funding Year 2002: July 1, 2002 through June 30, 2003

State or Jurisdiction	USAC Disbursements on Behalf of Rural Health Care Providers	Population in Rural Areas[1]	Disbursements Per Person in Rural Areas
Alabama	$24	1,407	$0.017
Alaska	12,670	367	34.556
American Samoa	0	57	0.000
Arizona	997	954	1.046
Arkansas	60	1,435	0.042
California	346	2,521	0.137
Colorado	141	777	0.181
Connecticut	0	334	0.000
Delaware	0	157	0.000
District of Columbia	0	0	NA
Florida	220	1,427	0.154
Georgia	43	2,520	0.017
Guam	0	155	0.000
Hawaii	228	335	0.679
Idaho	95	862	0.110
Illinois	112	1,878	0.059
Indiana	15	1,691	0.009
Iowa	158	1,600	0.099
Kansas	220	1,193	0.185
Kentucky	535	2,069	0.258
Louisiana	2	1,111	0.001
Maine	19	854	0.023
Maryland	0	385	0.000
Massachusetts	0	335	0.000
Michigan	591	1,769	0.334
Minnesota	837	1,594	0.525
Mississippi	76	1,821	0.042
Missouri	33	1,799	0.019
Montana	501	705	0.712
Nebraska	524	811	0.646
Nevada	56	305	0.182
New Hampshire	0	380	0.000
New Jersey	0	0	NA
New Mexico	235	856	0.274
New York	21	1,537	0.013
North Carolina	171	2,612	0.065
North Dakota	467	367	1.271
Northern Mariana Islands	0	69	0.000
Ohio	125	2,139	0.058
Oklahoma	71	1,378	0.052
Oregon	26	977	0.026
Pennsylvania	12	1,893	0.006
Puerto Rico	0	3,859	0.000
Rhode Island	0	55	0.000
South Carolina	21	1,205	0.017
South Dakota	356	503	0.707
Tennessee	56	1,827	0.031
Texas	21	3,280	0.006
Utah	361	531	0.681
Vermont	0	448	0.000
Virgin Islands	66	109	0.607
Virginia	195	1,503	0.130
Washington	77	1,136	0.068
West Virginia	49	1,043	0.047
Wisconsin	396	1,757	0.225
Wyoming	153	354	0.431
Totals	$21,380	58,795	$0.364

Note: Disbursements through June 2, 2005. Because of the appeals process, funding commitments and disbursements may be made after the program year ended.

[1] Population in entirely rural counties as of April 1, 2000 from the Census Bureau. Some commitments were allowed in non-rural counties in areas affected by the Goldsmith Modification. See 47 C.F.R. § 54.5. For those counties, the 2000 rural population has been estimated.

Source: USAC data. Rollups performed by the Industry Analysis and Technology Division, Wireline Competition Bureau, FCC.

Table 5.4
Disbursements per Person for Rural Health Care Support Mechanism, by State
Values in Thousands, Except Disbursements per Person in Rural Areas

Funding Year 2003: July 1, 2003 through June 30, 2004

State or Jurisdiction	USAC Disbursements on Behalf of Rural Health Care Providers	Population in Rural Areas[1]	Disbursements Per Person in Rural Areas
Alabama	$27	1,407	$0.019
Alaska	11,138	367	30.378
American Samoa	0	57	0.000
Arizona	461	954	0.483
Arkansas	51	1,435	0.036
California	242	2,521	0.096
Colorado	105	777	0.136
Connecticut	0	334	0.000
Delaware	0	157	0.000
District of Columbia	0	0	NA
Florida	97	1,427	0.068
Georgia	70	2,520	0.028
Guam	0	155	0.000
Hawaii	212	335	0.632
Idaho	80	862	0.093
Illinois	58	1,878	0.031
Indiana	19	1,691	0.011
Iowa	127	1,600	0.080
Kansas	316	1,193	0.265
Kentucky	450	2,069	0.217
Louisiana	1	1,111	0.001
Maine	2	854	0.002
Maryland	0	385	0.000
Massachusetts	0	335	0.000
Michigan	433	1,769	0.245
Minnesota	748	1,594	0.470
Mississippi	97	1,821	0.054
Missouri	63	1,799	0.035
Montana	463	705	0.658
Nebraska	594	811	0.732
Nevada	21	305	0.070
New Hampshire	0	380	0.000
New Jersey	0	0	NA
New Mexico	155	856	0.181
New York	14	1,537	0.009
North Carolina	71	2,612	0.027
North Dakota	390	367	1.060
Northern Mariana Islands	0	69	0.000
Ohio	80	2,139	0.038
Oklahoma	30	1,378	0.022
Oregon	3	977	0.003
Pennsylvania	19	1,893	0.010
Puerto Rico	0	3,859	0.000
Rhode Island	0	55	0.000
South Carolina	4	1,205	0.004
South Dakota	302	503	0.601
Tennessee	9	1,827	0.005
Texas	3	3,280	0.001
Utah	548	531	1.033
Vermont	1	448	0.002
Virgin Islands	114	109	1.043
Virginia	162	1,503	0.108
Washington	38	1,136	0.033
West Virginia	72	1,043	0.069
Wisconsin	739	1,757	0.421
Wyoming	121	354	0.341
Totals	$18,752	58,795	$0.319

Note: Disbursements through June 2, 2005. Because of the appeals process, funding commitments and disbursements may be made after the program year ended.

[1] Population in entirely rural counties as of April 1, 2000 from the Census Bureau. Some commitments were allowed in non-rural counties in areas affected by the Goldsmith Modification. See 47 C.F.R. § 54.5. For those counties, the 2000 rural population has been estimated.

Source: USAC data. Rollups performed by the Industry Analysis and Technology Division, Wireline Competition Bureau, FCC.

6. Subscribership and Penetration

The number and percentage of households that have telephone service represent the most fundamental measures of the extent of universal service. Continuing analysis of telephone penetration statistics allows us to examine the aggregate effects of Commission actions on households' decisions to maintain, acquire or drop telephone service. This section presents comprehensive data on telephone penetration statistics collected by the Bureau of the Census under contract with the Federal Communications Commission.[1] Along with telephone penetration statistics for the United States and each of the states from November 1983 to March 2005, data are provided on penetration based on various demographic characteristics. This section also updates information on telephone penetration by income by state.[2] This information is designed to help evaluate the degree of success of making telephone service available to low-income households in each state.

The most widely used measure of telephone subscribership is the percentage of households with telephone service, sometimes called a measure of telephone penetration. Prior to the 1980s, precise measurements of telephone subscribership received little attention. Traditionally, telephone penetration was measured by dividing the number of residential telephone lines by the number of households. Measures of penetration based on the number of residential lines, however, became subject to a large margin of error as more and more households added second telephone lines and more consumers acquired second homes. By 1980, the traditional measure of penetration (residential lines divided by the number of households) reached 96%, while the number of households reporting that they had telephones in the 1980 census was 92.9%.

Recognizing the need for more precise periodic measurements of subscribership, the Commission requested that the Census Bureau include questions on telephone availability as part of its Current Population Survey (CPS), which monitors demographic trends between the decennial censuses. This survey is a staggered panel survey in which the people residing at particular addresses are included in the survey for four consecutive months in one year and the same four months in the following year. Use of the CPS has several advantages: it is conducted every month

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1   This information was included in Industry Analysis and Technology Division, Wireline Competition Bureau, Federal Communications Commission, *Telephone Subscribership in the United States* (May 25, 2005). That report is updated three times a year. After the cutoff date for data in this report, we received new data for July 2005 showing an increase in the penetration rate to 94.0%. Those data are included in *Telephone Subscribership in the United States* (November 7, 2005).

2   This information was included in Industry Analysis and Technology Division, Wireline Competition Bureau, Federal Communications Commission, *Telephone Penetration by Income by State* (March 10, 2005). That report contains information on the number of households in each state as well as the percentages reported here.

by an independent and expert agency; the sample is large; and the questions are consistent. Thus, changes in the results can be compared over time with a reasonable degree of confidence.

Unfortunately, the results of the CPS cannot be directly compared with the penetration figures contained in the 1980, 1990, and 2000 decennial censuses. This is due to differences in sampling techniques and survey methodologies, and because of differences in the context in which the questions were asked. For example, the 2000 decennial census reported 97.6% of all occupied housing units in the United States had telephone service available, whereas the CPS data showed a penetration rate of 94.6% of households for March 2000. This difference is statistically significant and appears to indicate that the CPS value may be on the low side and the decennial census value may be on the high side, with the most probable value lying somewhere in between.

The decennial census data have the advantage of using much larger samples than the CPS because they are based on a sample of one-in-six households that filled out the Census Bureau's long ᴛrm. This makes it possible to look at long-run trends for small minority groups. For example, statistics from the 2000 census estimated that 67.9% of all American Indian households living on federally recognized reservations and trust lands had telephone service, as compared with 46.6% estimated from the 1990 census.[3]

The specific questions asked in the CPS are: "Does this house, apartment, or mobile home have telephone service from which you can both make and receive calls? Please include cell phones, regular phones, and any other type of telephone."[4] And, if the answer to the first question

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3   For more information, see the report Industry Analysis and Technology Division, Wireline Competition Bureau, Federal Communications Commission, *Telephone Subscribership on American Indian Reservations and Off-Reservation Trust Lands* (May 5, 2003).

4   The questions are intended to be neutral as to whether the household has wireline or wireless phones. Through November 2004, this question had been worded: "Is there a telephone in this house/apartment?" For the November 2001 survey, households were also asked which type(s) of phones they had. While the response rate was not sufficient for a complete reporting of the results of this follow-up question, 1.2% of the households indicated that they had only wireless phones. 5.9% of the households failed to answer this question. The CPS no longer asks this follow-up question on a regular basis. However, a similar question was again asked in February 2004 for a special supplement given to a portion of the sample. In that month, 4.9% of those completing the supplement indicated that they had only wireless phones. 12.5% of the households failed to complete the supplement, and when imputed responses of those households are included, the estimate of households with only wireless goes up to 6.0%. Because of the increasing number of households that have wireless only, there was some concern that some of these households may not think of their cell phones when asked if they have a telephone. Consequently, beginning in December 2004, CPS changed its telephone question to the wording given above. It is possible that some of the drop in the penetration rate between November 2004 and March 2005 is for households who had a phone, but did not have

is "no," this is followed up with, "Is there a telephone elsewhere on which people in this household can be called?" If the answer to the first question is "yes," the household is counted as having a telephone "in unit." If the answer to either the first or second question is "yes," the household is counted as having a telephone "available." The "in unit" data and the "available" data are reported in Tables 6.6 through 6.10 and 6.12 through 6.16, and Charts 6.1 and 6.8. All of the remaining tables and charts of this section just report the "in unit" data.

Although the survey is conducted every month, not all questions are asked every month. The telephone questions are asked once every four months: in the month that a household is first included in the sample and in the month that the household reenters the sample a year later. Since the sample is staggered, the reported information for any given month actually reflects responses over the preceding four months. Aggregated summaries of the responses are reported to the Commission, based on the surveys conducted through March, July, and November of each year. The CPS later provides the Commission with the raw data files containing all of the responses to all of the questions on the CPS questionnaires in those months.[5]

The Census Bureau data are based on a nationwide sample of about 50 to 60 thousand households in the 50 states and the District of Columbia. (The CPS does not cover outlying areas that are not states, such as Puerto Rico, Guam, American Samoa, the Virgin Islands, and the Northern Mariana Islands.) Because a sample is used, the estimates are subject to sampling error. For the nationwide totals, changes in telephone penetration between consecutive reports of less than 0.4% may be due to sampling error and cannot be regarded as statistically significant.[6] As explained below, when comparing the same month in two consecutive years, changes of less than or equal to 0.3% are not statistically significant. When comparing annual averages, changes of less than or equal to 0.2% are not statistically significant. The annual averages are the average of the three surveys of the year in question. For individual states or other subgroups of the U.S. population, the amount of sampling variability is much greater, because the sample sizes are smaller. This will require larger changes to yield statistical significance at the same confidence level.

The data in this section are not seasonally adjusted. After adjusting for the trend over time, there is an average increase of less than 0.2% among the reported months. All of the changes are below the threshold of statistical significance.

Once a year, in March, the CPS supplements its survey with additional questions, which include detailed information about income, and augments its sample with about 2,500 additional Hispanic households. Starting in 2001, the sample was further augmented with about 20,000

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service.

5   Tables 6.3 through 6.5, 6.11, and 6.17 of this section are derived from these raw data files.

6   The determination of the statistical significance of a change over time is discussed below. The critical value is dependent on the sizes of the samples from which the change is computed and by the confidence level, which is 95% here.

additional households with children.[7] The more detailed information from the March surveys makes it possible to adjust the income categories for inflation, and therefore make the purchasing power within each category stable over time. In the July and November surveys, only broad income categories are reported. (These are the categories that appear in Table 6.7.)

The Commission's Lifeline support mechanism was instituted in 1985 to help low-income households afford the monthly cost of telephone service. Under the federal Lifeline support mechanism, telephone companies offer reduced rates to qualifying households and receive reimbursement from the federal universal service support mechanisms. Initially, Lifeline was available only in those states that chose to participate by providing matching assistance.

Effective in 1998, the federal Lifeline support mechanism was revised so that a basic level of assistance would be provided in all states.[8] Additional federal support is also provided wherever a state chooses to provide matching assistance, at a rate of $1 in federal support for each $2 of state matching support, up to a maximum of $1.75 federal support (corresponding to $3.50 of state matching support). States may provide further support without further matching federal assistance.

Results and Statistical Analysis

Census Bureau figures for March 2005 show that the percentage of households subscribing to telephone service is 92.4%. This figure is down 1.8% from March 2004. This decrease is statistically significant. The average penetration rate for the year 2004 was 93.8%, which is down 1.3% from the 2003 average. This decrease is also statistically significant.

This section includes figures showing subscribership percentages by state, by the head of the household's age and race, by household size, by income, and for adult individuals by labor force status. The March 2005 data show that 93.2% of adult individuals in the civilian non-institutionalized population have a telephone in their household. This is down 1.8% from March 2004. This decrease is statistically significant. The average penetration rate for 2004 was 94.7% for adult individuals, which is down 1.2% from the 2003 average. This decrease is also statistically significant.

This section contains seventeen tables and nine charts presenting penetration statistics for various geographic and demographic characteristics. The charts and the first five tables present

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7   The responses from the additional Hispanic households and households with children are not included in Tables 6.1, 6.2, and 6.6 through 6.10. Thus, in some cases, there may be small discrepancies between the percentages in those tables and the percentages in Tables 6.3 through 6.5 and 6.11.

8   The basic federal Lifeline support level is the subscriber line charge plus $1.75 per line per month. Eligible subscribers living on tribal lands may receive up to $25 additional Lifeline support as needed to bring their monthly rate down to $1.

summaries of the available information. Tables 6.6 through 6.11 present more detailed information. In Tables 6.6 through 6.10, only the annual averages are included for the years 1984 through 2002. March, July, and November data for those years are available in previous Monitoring Reports in CC Docket Nos. 87-339 or 98-202. Tables 6.12 through 6.17 provide information necessary to determine the statistical significance of changes in the penetration rates over time.

Table 6.1 summarizes the telephone penetration for the United States, combining information on the number of households with the penetration rates.

Chart 6.1 graphically depicts the nationwide penetration rates for households over time.

Table 6.2 summarizes the telephone penetration rates by state, showing the average rates for 1984 and 2004, the change between those two years, and an indication as to whether the change is statistically significant. The statistical significance of a change is determined not only by the magnitude of that change, but also by the sizes of the samples used to estimate the change.

Chart 6.2 depicts the states with average 2004 penetration rates (as shown in Table 6.2) more than 1% below the national average, within 1% of the national average, or more than 1% above the national average.

Chart 6.3 depicts changes in household penetration rates by state (as shown in Table 6.2) between the average 1984 and 2004 rates. States with statistically significant increases or decreases are shown, along with other states with increases or decreases.

Chart 6.4 depicts the relationship between telephone penetration and household income, using average 2004 penetration rates for all households and for households headed by white, black, and Hispanic persons.[9] It is based on data in Table 6.7.

Chart 6.5 depicts the relationship between telephone penetration and household size, using average 2004 penetration rates for all households and for households headed by white, black, and Hispanic persons. It is based on data in Table 6.8.

Chart 6.6 depicts the relationship between telephone penetration and the head of the household's age, using average 2004 penetration rates for all households and for households headed by white, black, and Hispanic persons. It is based on data in Table 6.9.

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9   The CPS includes three racial categories: white, black, and other. Others, which include Native Americans, Asians, and Pacific Islanders, are not reported separately because of small sample sizes, but they are included in the totals. Hispanics are reported as an ethnic group, and can be of any race.

Chart 6.7 depicts the relationship between telephone penetration and labor force status for civilian non-institutionalized adults, using average 2004 penetration rates for all adults and for white, black, and Hispanic adults. It is based on data in Table 6.10.

Chart 6.8 graphically depicts the nationwide penetration rates for civilian non-institutionalized adults over time. It is also based on data in Table 6.10.

Chart 6.9 shows the telephone penetration rates in March of each year through 2004 for each of five income categories, adjusted for inflation, for the entire United States. It is based on data in Table 6.11. The income categories (expressed in March 1984 dollars) are: $9,999 or less; $10,000 - $19,999; $20,000 - $29,999; $30,000 - $39,999; and $40,000 or more. These categories were chosen because they are of approximately equal size, both in terms of income ranges and the number of households in each category. The upper limit of the lowest category is also approximately equal to the federal poverty line for a family of four. Between 1984 and 2004, there was a statistically significant increase in the penetration rate for ..'l households. There also were statistically significant increases in penetration rates in the two lowest income categories over this time period, with the largest increase being in the lowest income category.[10] For the middle income category, there was no significant change between 1984 and 2004. For the two highest income categories there were small but significant decreases in the penetration rate between 1984 and 2004. Not all of the increases in the national total penetration rate can be explained by increases in real income, because real income increases are reflected in the movement of households between categories. Thus, penetration changes within each income category represent changes holding real income constant.

To help evaluate the effect of the federal Lifeline support mechanism, Table 6.3 focuses on changes in telephone penetration rates from just before the program was established to just before it was substantially expanded in 1998, by comparing penetration rates for states with and without state Lifeline programs prior to 1998.[11] Briefly, penetration rate increases were greater, on average, in states with Lifeline programs than in states without Lifeline programs.[12] The effect is especially apparent for low-income households,[13] which are the households primarily

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10   See footnote 16 for the critical values for these significance tests.

11   The expanded program was adopted in 1997, and took effect on January 1, 1998. States with Lifeline programs prior to 1998 are identified in Table 6.3 by showing that the year that Lifeline began was before 1998. Prior to the expansion, states participating in the federal Lifeline program were required to match the federal support with their own state support.

12   The averages for the groups of states were computed as weighted averages of the states in the groups, using the total number of households in each state as weights. This was calculated as the total number of households with telephone service in each group of states divided by the total number of households in that group.

13   Low-income households are those with incomes under $10,000 expressed in 1984

affected by the federal and state Lifeline programs. Between March 1984 and March 1997, the increase in the average penetration rate in states with Lifeline programs was 6.5% for low-income households. During this period, the increase in subscribership among low-income households in those states that adopted Lifeline programs was double that of states that did not adopt such programs, although there may have been other factors besides Lifeline that contributed to this result.

Information on all households is also included in Table 6.3. Overall penetration rates are more generally available and more commonly cited as measures of penetration than are rates only for low-income households. Penetration rate increases were again greater, on average, in states that established Lifeline programs. The increase for states with Lifeline programs was statistically significant,[14] but the increase for states without state Lifeline programs was not. States that adopted Lifeline programs before 1998 generally had lower penetration rates in 1984 than those that did not adopt such programs. By 1997, the difference in the penetration rates for the two groups diminished significantly.

Table 6.4 focuses on the change in penetration rates between March 1997 (before the expansion of the federal Lifeline program) and March 2004. The states are divided into four groups:
- "Full Assistance" states providing sufficient support to get the maximum federal matching support. The total state support in these states was $3.50 or more;[15]
- "Nearly Full Assistance" states providing slightly less support than that required to get the maximum federal matching support. In most cases, $3.50 support was provided to most but not all lifeline customers. The total state support in these states averaged over $3.00 per lifeline customer but less than $3.50.
- "Intermediate Assistance" states providing some support, but less than enough to qualify for the maximum federal support. The monthly level of state support in such states was more than $0, but less than $3.00;
- "Basic Assistance" states providing no state support, and receiving just the basic federal support.

On average, for low-income households in those states where the maximum federal support is provided, telephone penetration increased significantly, by 3.0%, between March 1997 and March 2004. In this group of states, there was a smaller but not statistically significant increase in the overall penetration rate for all households. For states with nearly full assistance, there was an increase of 3.6% in the low-income penetration rate and a smaller but not

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dollars, which is equivalent to $17,954 in 2003 dollars.

14   See the paragraph describing Tables 6.12 through 6.16 for a discussion of the determination of the statistical significance of a change over time. The critical value is dependent on the sizes of the samples from which the change is computed.

15   Any state support over $3.50 is not matched by further federal support.

significant increase in overall penetration. For states with intermediate assistance, there was an increase of 0.9% in the low-income penetration rate and a small but not significant decrease in overall penetration. For states with just the basic federal support, the average penetration for low-income households decreased by 2.1% and the average penetration for all households decreased by 1.4%, and neither change was statistically significant.

Data on individual states are provided in Table 6.5. The support amounts shown in Table 6.5 are the average state support for all lifeline subscribers in March 2004.

Table 6.6 shows the CPS penetration rates for the United States and for each state beginning with November 1983. Because the CPS began collecting this data only in 1983, comparable values are not available prior to November 1983. For each of the surveys, the column headed "Unit" indicates the percentage of households for which there is a telephone in the housing unit. The column headed "Avail." indicates the percentage of households which have telephone service available for incoming calls, either in the housing unit or elsewhere (such as at work or at a neighbor's home).

Table 6.7 shows the nationwide penetration rates for households by income and the race of the head of the household. It shows a strong relationship between income and penetration. Caution should be used in comparing these figures over time, because these income levels are not adjusted for inflation. Thus, the same nominal income level at two points in time will reflect different real incomes in terms of purchasing power. Also, the income categories have changed over time due to the changing value of the dollar. Consequently, when evaluating penetration changes by income levels over time, Table 6.11 should be used.

Table 6.8 shows the nationwide penetration rates for households by the size of the household and the race of the householder. It shows that penetration is higher for households of 2 to 5 people than it is for single-person households or those with 6 or more people.

Table 6.9 shows the nationwide penetration rates for households by the age and race of the head of the household. It shows that the penetration rate is lowest for young and non-white households.

Table 6.10 shows the nationwide penetration rates for all persons that are at least 15 years old in the civilian non-institutionalized population by their race and employment status. Since this table is for individual adults rather than households, the total penetration rates are different from those in the previous tables. It shows that penetration is lowest among the unemployed.

Table 6.11 shows the penetration rates for each of the income categories, adjusted for inflation, shown in Chart 6.9, for each state for March of each year. The table shows only five categories, rather than the more numerous categories of the nationwide data in Table 6.7, because the small sample sizes caused by a larger number of categories would result in unreliably large sampling variability for the individual states. The relative levels of the March Consumer Price Index for all items (as reported in Table 7.4) were used to make the inflation adjustment. Thus, for

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example, $10,000 in March 1984 dollars had the same purchasing power as $18,252 in March 2004 dollars. The precise current dollar values in each year are reported at the end of Table 6.11.

Tables 6.12 through 6.16 present the critical values at the 95% confidence level for testing the statistical significance of changes in penetration rates over time in the earlier tables. These critical values are relevant because changes less than or equal to the values shown are likely to be due to sampling error, and thus cannot be regarded as demonstrating that a change in telephone penetration has occurred. In some cases, these critical values are very large because the sample sizes are very small for these subcategories, rendering the changes in estimated penetration rates unreliable. Because there is an overlap of half of the sample from year to year, but no overlap in the sample between surveys that are four months apart, annual changes are less subject to variations in sampling error. Consequently, the critical values should be multiplied by 0.8 when making a comparison for the same month in two consecutive years. When comparing the annual averages, the critical values should be multiplied by 0.5774, since these averages are based on three surveys, and hence have a lower standard error. When comparing annual averages of two consecutive years, the critical values should be multiplied by .46, taking into account both of the above factors.

Table 6.17 shows the sample sizes on which the estimates of Table 6.11 are based. The sampling variability is inversely related to the square root of the sample size. The critical values for individual income categories in Table 6.11 can therefore be estimated by taking the critical value for the state "In Unit" total and multiplying it by the square root of the ratio of the sample size for the state total to the sample size for the income category. In most cases, the critical value for an individual income category will be between two and three times the critical value for the state total.[16] In some cases, these critical values are very large because the sample sizes are very small for these subcategories, thereby rendering the estimated penetration rates unreliable.

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16   For example, using this methodology to calculate critical values for comparing the 1984 and 2003 values for the United States Total, the critical values are 0.8% for the $10,000 - $19,999 and the $40,000 or more categories, 0.9% for the $9,999 or less and $20,000 - $29,999 categories, and 1.1% for the $30,000 - $39,999 category. These compare with 0.4% for all households.
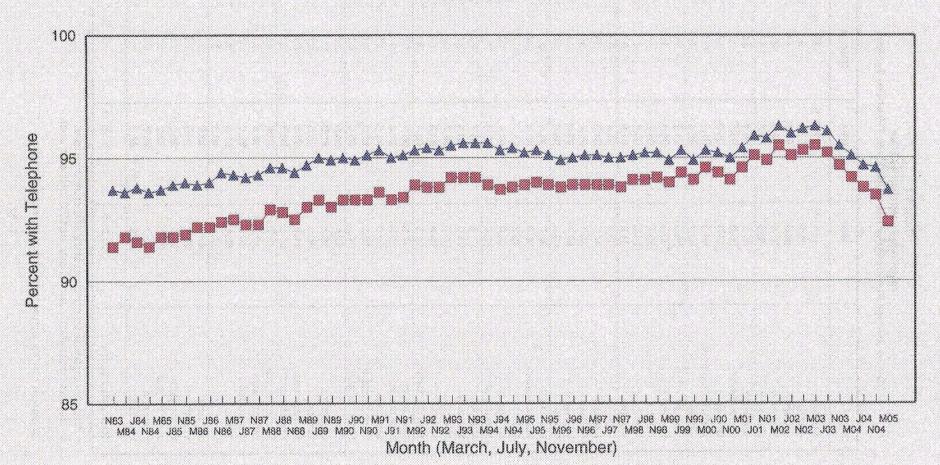
Table 6.1
Household Telephone Subscribership in the United States

Date		Households (millions)	Households with Telephones (millions)	Percentage with Telephones	Households without Telephones (millions)	Percentage without Telephones
November	1983	85.8	78.4	91.4%	7.4	8.6%
March	1984	86.0	78.9	91.8%	7.1	8.2%
July	1984	86.6	79.3	91.6%	7.3	8.4%
November	1984	87.4	79.9	91.4%	7.5	8.6%
March	1985	87.4	80.2	91.8%	7.2	8.2%
July	1985	88.2	81.0	91.8%	7.2	8.2%
November	1985	88.8	81.6	91.9%	7.2	8.1%
March	1986	89.0	82.1	92.2%	6.9	7.8%
July	1986	89.5	82.5	92.2%	7.0	7.8%
November	1986	89.9	83.1	92.4%	6.8	7.6%
March	1987	90.2	83.4	92.5%	6.8	7.5%
July	1987	90.7	83.7	92.3%	7.0	7.7%
November	1987	91.3	84.3	92.3%	7.0	7.7%
March	1988	91.8	85.3	92.9%	6.5	7.1%
July	1988	92.4	85.7	92.8%	6.7	7.2%
November	1988	92.6	85.7	92.5%	6.9	7.5%
March	1989	93.6	87.0	93.0%	6.6	7.0%
July	1989	93.8	87.5	93.3%	6.3	6.7%
November	1989	93.9	87.3	93.0%	6.6	7.0%
March	1990	94.2	87.9	93.3%	6.3	6.7%
July	1990	94.8	88.4	93.3%	6.4	6.7%
November	1990	94.7	88.4	93.3%	6.3	6.7%
March	1991	95.3	89.2	93.6%	6.1	6.4%
July	1991	95.5	89.1	93.3%	6.4	6.7%
November	1991	95.7	89.4	93.4%	6.3	6.6%
March	1992	96.6	90.7	93.9%	5.9	6.1%
July	1992	96.6	90.6	93.8%	6.0	6.2%
November	1992	97.0	91.0	93.8%	6.0	6.2%
March	1993	97.3	91.6	94.2%	5.7	5.8%
July	1993	97.9	92.2	94.2%	5.7	5.8%
November	1993	98.8	93.0	94.2%	5.8	5.8%
March	1994	98.1	92.1	93.9%	6.0	6.1%
July	1994	98.6	92.4	93.7%	6.2	6.3%
November	1994	99.8	93.7	93.8%	6.2	6.2%
March	1995	99.9	93.8	93.9%	6.1	6.1%
July	1995	100.0	94.0	94.0%	6.0	6.0%
November	1995	100.4	94.2	93.9%	6.2	6.1%
March	1996	100.6	94.4	93.8%	6.2	6.2%
July	1996	101.2	95.0	93.9%	6.1	6.1%
November	1996	101.3	95.1	93.9%	6.2	6.1%
March	1997	102.0	95.8	93.9%	6.2	6.1%
July	1997	102.3	96.1	93.9%	6.2	6.1%
November	1997	102.8	96.5	93.8%	6.3	6.2%
March	1998	103.4	97.4	94.1%	6.1	5.9%
July	1998	103.4	97.3	94.1%	6.1	5.9%
November	1998	104.1	98.0	94.2%	6.1	5.8%
March	1999	104.8	98.5	94.0%	6.3	6.0%
July	1999	105.1	99.2	94.4%	5.9	5.6%
November	1999	105.4	99.1	94.1%	6.3	5.9%
March	2000	105.3	99.6	94.6%	5.7	5.4%
July	2000	105.8	99.8	94.4%	5.9	5.6%
November	2000	106.5	100.2	94.1%	6.3	5.9%
March	2001	107.0	101.1	94.6%	5.8	5.4%
July	2001	106.9	101.7	95.1%	5.2	4.9%
November	2001	107.7	102.2	94.9%	5.5	5.1%
March	2002	108.3	103.4	95.5%	4.8	4.5%
July	2002	108.5	103.2	95.1%	5.3	4.9%
November	2002	109.0	104.0	95.3%	5.1	4.7%
March	2003	112.1	107.1	95.5%	5.0	4.5%
July	2003	112.1	106.8	95.2%	5.3	4.8%
November	2003	113.1	107.1	94.7%	6.0	5.3%
March	2004	112.9	106.4	94.2%	6.5	5.8%
July	2004	113.5	106.5	93.8%	7.1	6.2%
November	2004	113.8	106.4	93.5%	7.4	6.5%
March	2005	114.5	105.8	92.4%	8.7	7.6%

Note: Details may not appear to add to totals due to rounding.

Chart 6.1

Telephone Penetration

Households

Month (March, July, November)

■ In Housing Unit   ▲ Available

Table 6.2
Telephone Penetration by State
(Annual Average Percentage of Households with Telephone Service)

State	1984	2004	Change	
Alabama	88.4 %	92.2 %	3.8 %	*
Alaska	86.5	95.6	9.1	*
Arizona	86.9	91.8	4.9	*
Arkansas	86.6	88.6	2.0	
California	92.5	96.0	3.5	*
Colorado	93.2	95.8	2.6	*
Connecticut	95.5	95.5	0.0	
Delaware	94.3	96.0	1.8	*
District of Columbia	94.9	91.9	-3.0	#
Florida	88.7	93.4	4.7	*
Georgia	86.2	91.2	5.0	*
Hawaii	93.5	95.4	1.8	*
Idaho	90.7	94.8	4.1	*
Illinois	94.2	90.1	-4.1	#
Indiana	91.6	91.8	0.3	
Iowa	96.2	95.4	-0.8	
Kansas	94.3	94.8	0.4	
Kentucky	88.1	91.4	3.3	*
Louisiana	89.7	90.9	1.3	
Maine	93.4	96.6	3.2	*
Maryland	95.7	93.4	-2.3	#
Massachusetts	95.9	96.4	0.5	
Michigan	92.8	93.7	0.9	
Minnesota	95.8	97.1	1.3	
Mississippi	82.4	89.6	7.2	*
Missouri	91.5	93.7	2.2	*
Montana	91.0	93.5	2.5	*
Nebraska	95.7	95.7	0.0	
Nevada	90.4	92.2	1.8	
New Hampshire	94.3	96.4	2.1	*
New Jersey	94.8	95.1	0.3	
New Mexico	82.0	91.4	9.4	*
New York	91.8	94.5	2.7	*
North Carolina	88.3	93.3	5.0	*
North Dakota	94.6	95.0	0.3	
Ohio	92.4	94.9	2.5	*
Oklahoma	90.3	91.0	0.7	
Oregon	90.6	95.5	4.9	*
Pennsylvania	94.9	95.6	0.7	
Rhode Island	93.6	95.3	1.7	
South Carolina	83.7	93.4	9.8	*
South Dakota	93.2	93.6	0.4	
Tennessee	88.5	92.8	4.3	*
Texas	88.4	91.8	3.4	*
Utah	92.5	96.3	3.7	*
Vermont	92.3	95.9	3.6	*
Virginia	93.1	94.0	1.0	
Washington	93.0	95.5	2.5	*
West Virginia	87.7	93.2	5.5	*
Wisconsin	95.2	95.5	0.2	
Wyoming	89.9	94.6	4.7	*
Total United States	91.6 %	93.8 %	2.2 %	*

* Increase is statistically significant at the 95% confidence level.
\# Decrease is statistically significant at the 95% confidence level.

Differences may not appear to equal changes due to rounding.